2

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/464,637	12/15/1999	ANTHONY FUNG	(850063.564)	7886

30423 7590 02/09/2005

STMICROELECTRONICS, INC.
MAIL STATION 2346
1310 ELECTRONICS DRIVE
CARROLLTON, TX 75006

EXAMINER	
LONSBERRY, HUNTER B	

ART UNIT	PAPER NUMBER
2611	

DATE MAILED: 02/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/464,637	FUNG ET AL.	
	Examiner	Art Unit	
	Hunter B. Lonsberry	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 July 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *6-17 and 51-59* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *6-17 and 51-59* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *15 December 1999* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 6 is rejected under 35 U.S.C. 102(b) as being anticipated by the Cable Modem Telephony Return Interface Specification (hereafter referred to as CMTRIS).

Regarding claim 6, CMTRIS discloses a network station manager for a cable modem network station (figure 3-2, page 29) comprising:

a management task component configured to initialize the network station (when restarted) and to maintain connectivity of the network station with a cable network (figure 3-2), the management task component comprising a state machine configured to communicate with a plurality of task components (DHCP, TFTP, SNMP).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 7-17, and 51-59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cable Modem Telephony Return Interface Specification in view of Operations Support System Interface Specification.

Regarding claim 7, CMTRIS discloses in figure 3-2, a number of states, wherein the state machine comprises a centralized error handling state and peripheral states comprising an initialization state (start), a start dynamic-host-configuration protocol state (DHCP query), a configuration-download state (TFTP configuration profile), a start simple-network-management protocol state (generate SNMP alert via PPP), and an operational state (DONE), the cable modem may receive OSSI messages (figure 1-2, page 4), errors may be monitored (page 26, figure 3-1).

CMTRIS does not disclose an operational state configured to monitor for error messages and other messages communicated from other states and to communicate the error messages to the centralized error handling state and to send request messages to an Operational Support System Interface (OSSI) management task.

The OSSI specification discloses that a management agent is run on the cable modem (page 11-13, figure 2-1), details the OSSI messaging (page 13, provisioning and management protocols).

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify CMTRIS to utilize the OSSI management agent of OSSI specification, thus enabling remote administration of a cable modem.

OSSI specification does not disclose the use of an error handling state which monitors and reports errors from other states.

The examiner takes official notice that monitoring and reporting errors from other states via error handling is notoriously well known in the art. Monitoring errors, enables a device to correct errors and report problems.

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify the combination of CMTRIS and OSSI to utilize error handling thus enabling a device to correct errors and report problems.

Regarding claim 8, CMTRIS discloses the use of TFTP protocol (figure 3-2) which enables automatic downloads of data and software (page 71).

CMTRIS and OSSI are silent regarding responding to responding to a software upgrade message.

The examiner takes official notice that the use of a software upgrade message is notoriously well known in the art. For example, Microsoft's windows update, automatically detects what OS version a device is running and provides patches and update files to keep the OS up to date with system optimizations and security patches.

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify the combination of CMTRIS and OSSI to utilize a software upgrade message thus enabling a device to be kept up to date with system optimizations and security patches.

Regarding claim 9, CMTRIS discloses a network which utilizes OSSI.

CMTRIS and OSSI do not disclose utilizing an error handler which receives and error, requests error logging, initiate error recovery and if error recovery is not possible entering a dead state.

The examiner takes official notice that the use of an error handler which receives and error, request error logging, initiate error recovery and if error recovery is not possible entering a dead state is notoriously well known in the art. Error handling enables a device to detect report, and repair errors in order to enable a device to continue functioning, if errors can't not be fixed, a device may crash, thus entering a dead state.

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify the combination of CMTRIS and OSSI to utilize an error handler, thus enables a device to detect report, repair errors or enter a dead state thus enabling a device to continue functioning unless it receives a catastrophic failure.

Regarding claims 10-11, CMTRIS discloses that an initialization state is configured to initialize an IP stack (pages 8, 29-31, establishes IP link to TRAC via PPP) enables communication between an IP stack and the MAC (page 8).

Regarding claim 12, CMTRIS discloses a start DHCP state which is configured to initiate creating and commencement of DHCP stack (page 8, 29-33).

Regarding claim 13, CMTRIS discloses a configuration download state configured to start a configuration download task (pages 29, 34-35).

Regarding claim 14, CMTRIS discloses a SNMP state (page 80.

Regarding claim 15, CMTRIS discloses a channel upstream/downstream channel state configured to change an initial upstream channel identification to match a predetermined channel identification (pages 29, 34-35).

Regarding claim 16, CMTRIS discloses that the Cable Modem utilizes a start time of day state to initiate the creation and commencement of a time of day task component (page 46, section 4.3.1). The cable modem periodically receives time messages from the CMTS and compares the time data in the TSI management messages with the previously stored value.

Regarding claim 17, CMTRIS discloses that the cable modem periodically checks the time of day by comparing its time with TSI management messages (page 46, section 4.3.1).

Regarding claim 51, CMTRIS discloses method of administering a broadband, cable modem network station for connectivity to a network (page 29, figure 3-2), the method comprising:

initializing the network station to a predetermined set of parameters (stored PPP config, factory default procedure);

creating and starting a DHCP task (DHCP query);

creating and starting a time-of-day task (page 46, section 4.3.1.), The cable modem periodically receives time messages from the CMTS and compares the time data in the TSI management messages with the previously stored value.

creating and starting a configuration download task (TFTP configuration profile, page 71);

creating and starting a simple-network-management protocol task (page 8, SNMP alert);

entering an operational state upon successful initialization of the network station and connectivity with the network (done), , and, while in the operational state, monitoring the tasks for messages (page 46, TSI management messages)

CMTRIS does not disclose the use of error messages, receiving error messages and initiating error recovery in response to the error messages, and receiving request messages and sending request messages to a request message management task.

CMTRIS does not disclose an operational state configured to monitor for error messages and other messages communicated from other states and to communicate the error messages to the centralized error handling state and to send request messages to an Operational Support System Interface (OSSI) management task.

The OSSI specification discloses that a management agent is run on the cable modem (page 11-13, figure 2-1), details the OSSI messaging (page 13, provisioning and management protocols).

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify CMTRIS to utilize the OSSI management agent of OSSI specification, thus enabling remote administration of a cable modem.

OSSI specification does not disclose the use of an error handling state which monitors and reports errors from other states.

The examiner takes official notice that monitoring and reporting errors from other states via error handling is notoriously well known in the art. Monitoring errors, enables a device to correct errors and report problems.

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify the combination of CMTRIS and OSSI to utilize error handling thus enabling a device to correct errors and report problems.

Regarding claim 52, CMTRIS discloses that the DHCP process on the Cable Modem receives an IP address from a DHCP server (page 31).

Regarding claim 53, CMTRIS discloses that it receives a time of day message from a Time of day server and that its time is continuously updated throughout the day (page 46, section 4.3.1.) The cable modem periodically receives time messages from

the CMTS and compares the time data in the TSI management messages with the previously stored value.

Regarding claim 54, CMTRIS discloses that a configuration file is transmitted via TFTP (page 29).

CMTRIS and OSSI do not disclose sending a completion message when the download is completed or sending an error message.

The examiner takes official notice that sending a completion message when a transfer is complete or sending an error message is notoriously well known in the art. Sending completion messages enable networked devices to know whether or not data was successfully transmitted and error messages indicate if data was not received properly.

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify the combination of CMTRIS and OSSI to send completion and error messages, thus enabling the networked devices to know whether or not data was successfully transmitted and error messages indicate if data was not received properly.

Regarding claim 55, CMTRIS discloses a changing the channel upstream/downstream to match a channel ID in the change upstream/downstream channel message (page 29, 34-35).

CMTRIS inherently sends request messages to a message management task as CMTRIS discloses that SNMP is used (page 8).

Regarding claim 56, CMTRIS discloses that the cable modem utilizes SNMP and communicates with SNMP managers (page 8, 29, 59).

Regarding claim 57, CMTRIS discloses the use of TFTP protocol (figure 3-2) which enables automatic downloads of data and software (page 71).

CMTRIS and OSSI are silent regarding responding to responding to a software upgrade message and reinitializing the network station upon completion of the software upgrade.

The examiner takes official notice that the use of a software upgrade message and reinitializing a device is notoriously well known in the art. For example, Microsoft's windows update, automatically detects what OS version a device is running and provides patches and update files to keep the OS up to date with system optimizations and security patches, additionally it requires the device to be rebooted in order for the changes to come into effect.

Therefore, it would have been obvious to one skilled in the art at the time of invention to modify the combination of CMTRIS and OSSI to utilize a software upgrade message and rebooting after an update is complete thus enabling a device to be kept up to date with system optimizations and security patches.

Regarding claim 58, CMTRIS discloses the use of TFTP protocol (figure 3-2) which enables automatic downloads of data and software (page 71).

OSSI discloses that the OSSI specification's management agent includes the use of TFTP (page 13).

CMTRIS and OSSI inherently communicate with an OSSI management task to start the software upgrade task as both teach the use of TFTP protocol which provides automatic downloads of software.

Regarding claim 59, CMTRIS discloses the use of OSSI (page 4) the use of TFTP (figure 3-2) and SNMP (figure 3-2).

OSSI discloses the use of an OSSI management task (page 11-13).

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent 6,393,569 to Orenshteyn: Secured System for Accessing Application Services from a Remote Station.

U.S. Patent 6,588,016 to Chen: Method and Apparatus for Locating a Faulty Component in a Cable Television System Having Cable Modems.

Data Over Cable Technical Reports: Operations Support System Framework for Data Over Cable Services.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hunter B. Lonsberry whose telephone number is 703-

305-3234. The examiner can normally be reached on Monday-Friday during normal business hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Grant can be reached on 703-305-4755. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HBL

CHRIS GRANT
PRIMARY EXAMINER